

NOTES ON THE GENUS *TSOONGIA*

Harold N. Moldenke

Unfortunately, time is no longer available for me to prepare the detailed monograph originally planned for this genus, but it has seemed worthwhile to place on record the bibliographic and other notes accumulated by my wife and myself over the past fifty years. This is the 56th genus so treated by me in the present series of papers in this and other journals. Herbarium acronyms used herein are the same as have been employed in all the previous papers in this series since 1930 and are fully explained in my "Fifth Summary" (1971), volume 2, pages 795 to 801, and in *PHYTOLOGIA MEMOIRS*, no. 2, now in press.

*TSOONGIA* Merr., Philip. Journ. Sci. 23: 264. 1923.

Synonymy: *Tsoangia* Merr. ex Mold., Résumé Suppl. 3: 35, in syn. 1962.

Bibliography: E. D. Merr., Philip. Journ. Sci. 23: 264. 1923; A. W. Hill, Ind. Kew. Suppl. 7: 246. 1929; Fedde & Schust., Justs Bot. Jahresber. 53 (1): 1076. 1932; P'ei, Sinensia 2: 68. 1932; Hu & Chun, Icon. Pl. Sin. 3: 50, pl. 150. 1933; Junell, Symb. Bot. Upsal. 1 (4): 96. 1934; Dop in Lecomte, Fl. Gén. Indo-chine 4: 785. 1935; Hu, Bull. Chinese Bot. Soc. 1 (2): 95. 1935; Mold., Suppl. List Inv. Names 7. 1941; H. N. & A. L. Mold., Pl. Life 2: 32 & 53. 1941; Mold., Alph. List Inv. Names 44. 1942; Mold., Known Geog. Distrib. Verbenac., ed. 1, 57, 58, 100, & 101. 1942; Mold., Alph. List Inv. Names Suppl. 1: 2. 1947; Mold., Known Geogr. Distrib. Verbenac., ed. 2, 132, 135, 137, & 197. 1949; J. C. Willis, Dict. Flow. Pl., ed. 6, 750. 1951; Pételot, Pl. Med. Cambod. Laos Viet. 2 [Archiv. Recherch. Agron. Past. Viet. 18]: 245 (1953) and 4: 57 & 168. 1954; Angely, Cat. Estat. Gen. Bot. Fan. 17: 6. 1956; Mold., Résumé 171, 174, 177, 355, & 470. 1959; Runner, Rep. Groff. Coll. 362. 1961; Hartl, Beitr. Biol. Pfl. 37: 297. 1962; Mold., Résumé Suppl. 3: 35. 1962; F. A. Barkley, List Ord. Fam. Anthoph. 76 & 218. 1965; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 7, 1155. 1966; Mold., Résumé Suppl. 15: 11 (1967) and 16: 11. 1968; Rouleau, Guide Ind. Kew. 194 & 353. 1970; Mold., Fifth Summ. 1: 290, 292, & 303 (1971) and 2: 645, 758, & 911. 1971; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 8, 1185. 1973; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 41, 47, & 51. 1978.

Erect shrubs or small trees, somewhat pubescent; leaves decussate-opposite, simple, long-petiolate, the blades marginally entire; inflorescence axillary, cymose, loosely few-flowered, shorter than the subtending petiole; flowers small, hypogynous, zygomorphic; calyx small, campanulate, 2-lobed; corolla yellow, gamopetalous, the tube cylindrical, elongate, apically somewhat amplicate, the limb rather spreading, subequally 4- or 5-lobed, the lobes broadly ovate, much broader than the tube, the throat not bearded; stamens 4, epipetalous, subdidynamous, attached to the

central portion of the corolla-tube, subexserted; style single, elongate; stigma punctiform; ovary superior, 2-locular, the cells 2-ovulate.

Type species: *Tsoongia axillariflora* Merr.

A monotypic genus (as far as now known), according to Merrill most closely allied to *Premna* L. and somewhat intermediate between that genus and *Vitex* Tourn., although distinctly closer to the former. It differs notable from *Vitex* in its subequally 4- or 5-lobed corollas which are not bilabiate and the simple leaves and from *Premna* in its slender, elongated corolla-tubes, its strictly axillary inflorescences, its glabrous corolla-throat, and its entire punctiform stigma. In *Premna* the corolla-tubes are short and broad, while the inflorescences are (except in a single species) strictly terminal, the single exception being the anomalous *P. cauliflora* Stapf. In the present genus the corolla-throat is not bearded, the tube being glabrous within except for a few hairs below the insertion of the filaments.

Junell (1934) asserts that "Die Plazenten verwachsen schon oberhalb der Samenanlagen. Es kommen keine Ausbauchungen von der Fruchtknotenwand vor. Die Samenanlagen sind in ihren chalazalen Teil an die Plazenten befestigt. Die Höhlen der beide Karpellen werden, wie bei dieser Subtribus gewöhnlich, durch eine unvollständige, von den verwachsensten Fruchtblattrandern gebildete Scheidewand getrennt." He bases these observations on *McClure* 9692 in the British Museum herbarium.

Angely (1956) erroneously ascribes two species to this genus.

*TSOONGIA AXILLARIFLORA* Merr., Philip. Journ. Sci. 23: 264. 1923.

Synonymy: *Tsoongia axilliflora* Merr. ex Mold., Suppl. List Inv. Names 7, in syn. 1941. *Tsoongia axillarifolia* Merr. ex Mold., Alph. List Inv. Names Suppl. 1: 2, in syn. 1947. *Tsoangia axillari-flora* Merr. ex Mold., Résumé Suppl. 3: 35, in syn. 1962. *Tsoongia trifoliata* Pételot, in herb.

Bibliography: see bibliography of the genus as a whole.

Illustrations: Hu & Chun, Icon. Pl. Sin. 3: pl. 150. 1933.

An erect shrub or small tree, 3--8 m. tall; branches terete, purplish, glabrous; branchlets ferruginous-pubescent; petioles 2--3 cm. long, pubescent; leaf-blades membranous, oblong-ovate to elliptic-ovate, 6--10 cm. long, 3--5 cm. wide, apically acuminate, marginally entire, basally rounded to subacute, olivaceous or dark-olivaceous and shiny above, glabrous or pubescent on the midrib, paler and subbrunneous (in drying) beneath, obscurely punctulate, more or less pubescent on the midrib and secondaries; secondaries 6 or 7 per side, slender, conspicuous beneath, curvate, anastomosing; cymes short-pedunculate, 1--2 cm. long, few-flowered; bracts linear, scarcely 1 mm. long; calyx subcampanulate, 2.5--3 cm. long, 2-lipped, one lip ovate, about 1 mm. long and 1.5 mm. wide, apically rounded, marginally entire, the other lip 2-dentate, the teeth ovate, apically acute; corolla-tube 9 mm. long, externally granulose-glandular, subequally 4- or 5-lobed, the lobes ovate, 2 mm. long, apically rounded; filaments glabrous, slightly exserted; anthers 1 mm. long; fruit drupaceous, globose, black, 2 mm. in di-

ameter, glabrous.

This species, the type species of the genus is based on *McClure 3143* [Herb. Canton Chr. Coll. 9692] from forested ravines at Yik Tsok Mau, Hainan island, China, collected on May 18, 1922, originally deposited in the herbarium of the Philippine Bureau of Science in Manila, now doubtless destroyed. The genus is dedicated to Professor Ts'oong (Chung) Kwan Kwong of Peking University. Merrill (1923) cites also *Ts'oong 1908* from Kwantung.

Pételot (1953) asserts that the species is "Endémique au Nord-Vietnam et au Centre-Vietnam ainsi qu'à Haïnan" and that a leaf and bark decoction of this plant is used medicinally to treat itching, mange, and scab. The vernacular name for the plant in Indochina is "tho".

Recent collectors describe the species as a slender branched shrub, 2.7--5 m. tall, a tree, 2--8 m. tall, or even as "scandent on trees" [*Liang 62622*], the trunk 30--90 cm. in diameter at breast height, the bark gray, the branches gray-green, the leaves thin-papery, dark-green and shiny above, lighter-green beneath, the fruit obovate, green or light-green to yellow-green when immature, lustrous purple or purplish-green to greenish-brown, or even reddish-black, when mature. They have found it growing on mountainsides, in forested ravines, and in the dense shade of mixed woods, at 1000 m. altitude, flowering in July, and in fruit in July, August, and October.

The corollas are said to have been "greenish" on *Ching 8264* and "yellow" on *Liang 62622* & *62725*, *McClure 3143*, and *Tsang & Fung 581*.

Citations: CHINA: Kwangsi: *R. C. Ching 8264* (N). CHINESE COASTAL ISLANDS: Hainan: *Chun & Tso 44022* (B, N, W--1669552); *How 72362* (Bi); *Liang 62622* (N), *62725* (N, S, W--1670909), *63184* (N); *F. A. McClure 3143* [Herb. Canton Chr. Coll. 9692] (Bi--isotype, Ca--325750--isotype, Ca--366331--isotype, Gg--127988--isotype, N--photo of type, Ph--type, Z--photo of type); *Tsang & Fung 581* (B, N, W--1659944); *C. Wang 35721* (N). VIETNAM: Annam: *Poilane 11219* (W--2496744). Tonkin: *Pételot 5687* (W--1717084). MOUNTED ILLUSTRATIONS: Hu, *Icon. Pl. Sin.* 3: pl. 150. 1933 (N, Z).

-----

NOTES ON THE GENUS *MONOCHILUS*

Harold N. Moldenke

Herewith are presented notes, chiefly bibliographic, assembled on this genus by my wife and myself over the past fifty years. This is the 55th genus on which our notes have been published to date. Time for a detailed monograph, as originally planned, is now, unfortunately, no longer available. Full explanation of the herbarium acronyms herein employed -- the same as used by me in